

ABSTRACT

This invention is directed to pure and modified Ta₂O₅ thin films deposited on suitable substrates and methods for making these Ta₂O₅ thin films. These Ta₂O₅ thin films exhibit superior properties for microwave communication, dynamic random access memory and integrated electronic applications. The Ta₂O₅ thin films perform well in these types of technologies due to the Ta₂O₅ thin film component which allows for high dielectric constants, low dielectric loss, and good temperature and frequency stability, thus making them particularly useful in high frequency microwave applications.